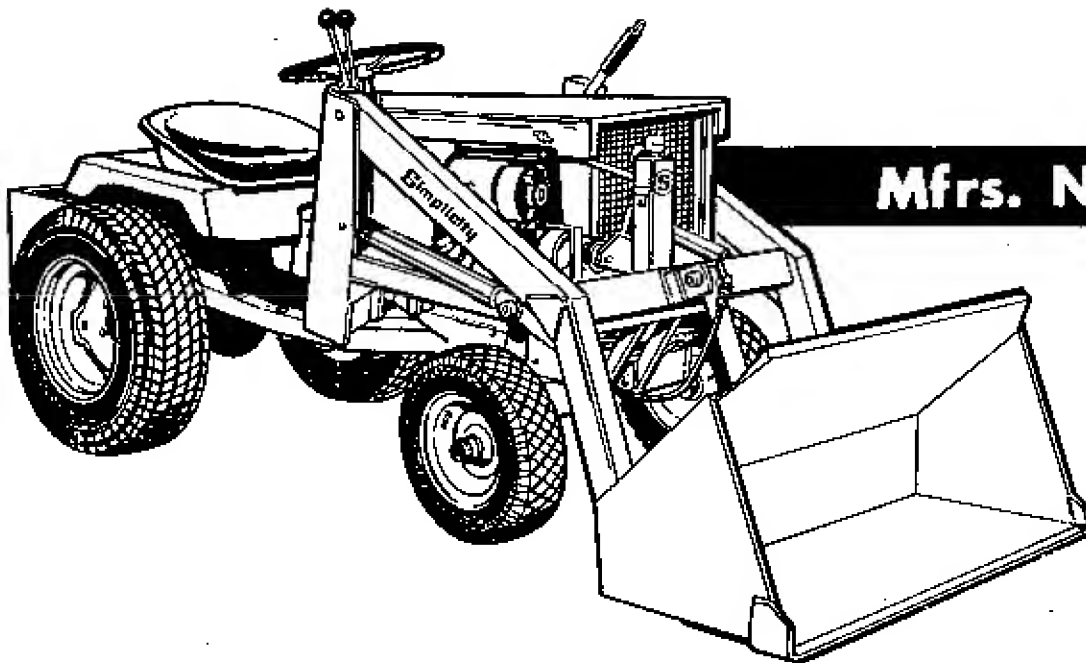
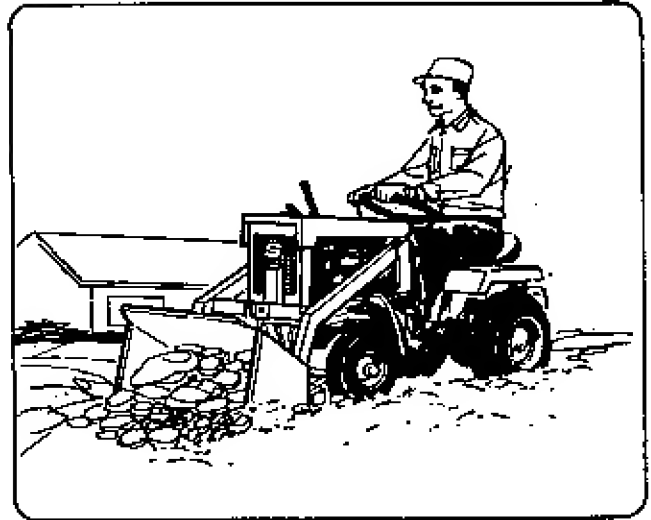


# ***Simplicity***



**Mfrs. No. 515**

## **FRONT END LOADER**

12 H.P. ATTACHING KIT MFR. NO. 510

10 H.P. ATTACHING KIT MFR. NO. 516



MADE IN U.S.A.

**SIMPLICITY MANUFACTURING COMPANY, INC.**

**1307**

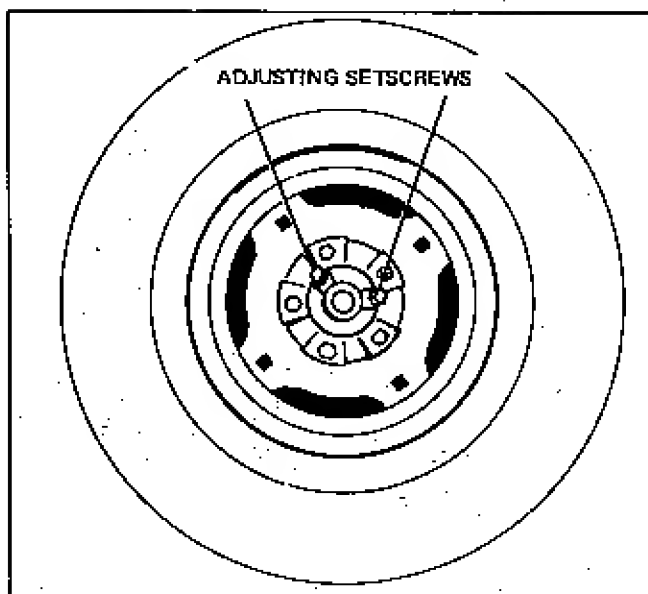


Figure 1.

## MOUNTING

1. Remove the two controlled traction bolts in the right hand wheel hub and install the 7/16-20 x 1/2" long cup point set screws. See Figure 1.

2. Remove both rear wheels and install the left and right wheel adapters.

## NOTE

The right wheel adapter requires the (5) No. 105133 spacers using the (5) 7/16 x 20 x 1-1/2" hex head capcrew. See Figures 2 and 3.

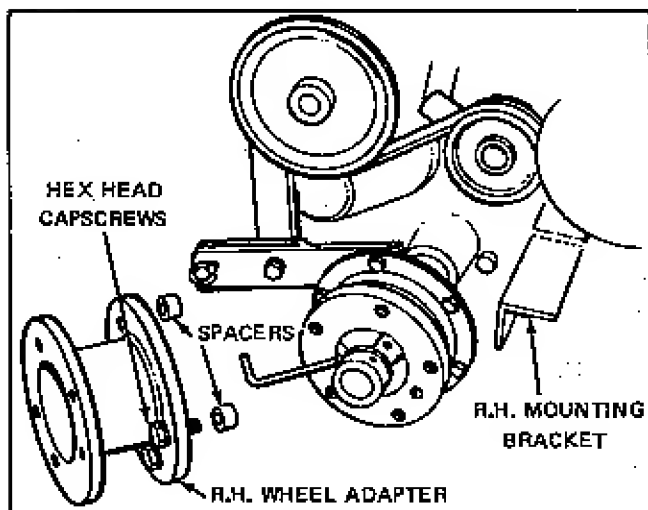


Figure 2.

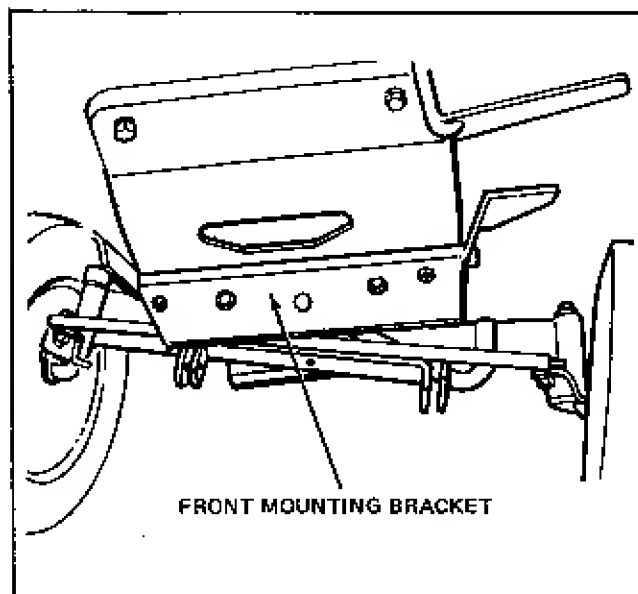


Figure 3.

3. Remove the No. 157482 frame angle and install the front mounting bracket under frame as shown in Figure 3 using the same hardware.

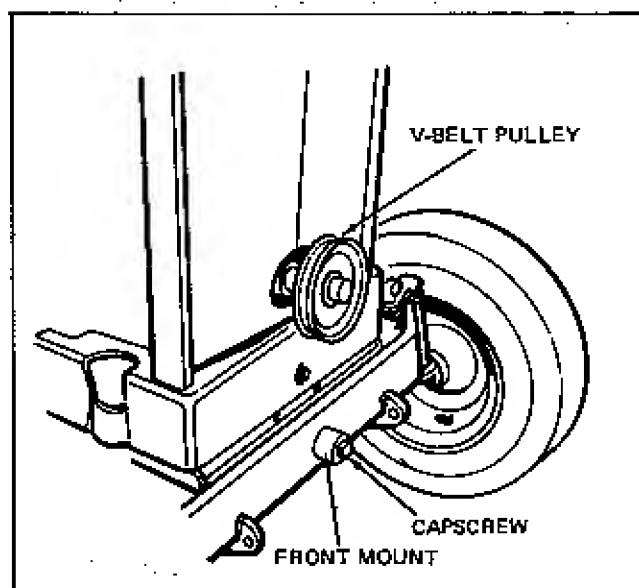


Figure 4.

4. Remove front axle bolt and replace with 1/2 x 4-1/4" capcrew using the No. 125110 front mount in place of the flat washer. See Figure 4.

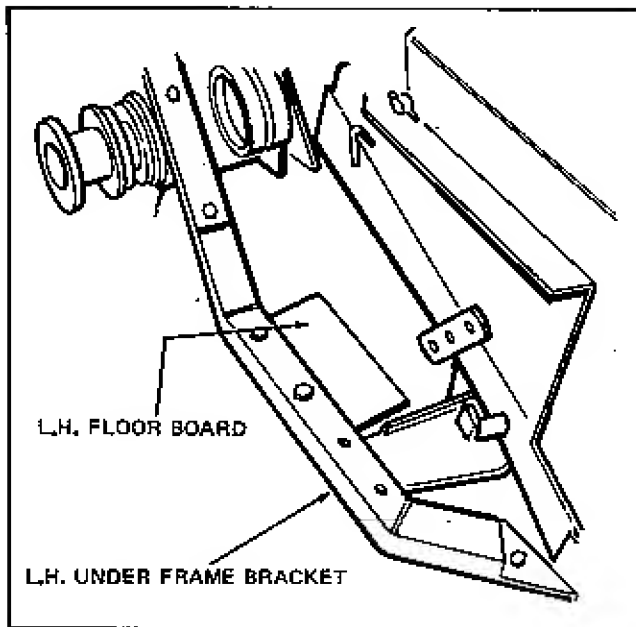


Figure 5.

5. Install the No. 510-12 H.P. attaching bracket kit or the No. 516-10 H.P. attaching bracket kit as shown on pages 6 and 8.

6. Install left and right floor boards using the  $1/2 \times 2-3/4$ " capscrows from shipping and the spacers provided. See Figure 5.

7. Install weight box using the  $1/2 \times 1-1/4$ " capscrows, lockwashers and nuts. See Figure 6.

8. Install V-Belt pulley on crankshaft of engine using the No. 125088 key provided. See Figure 4.

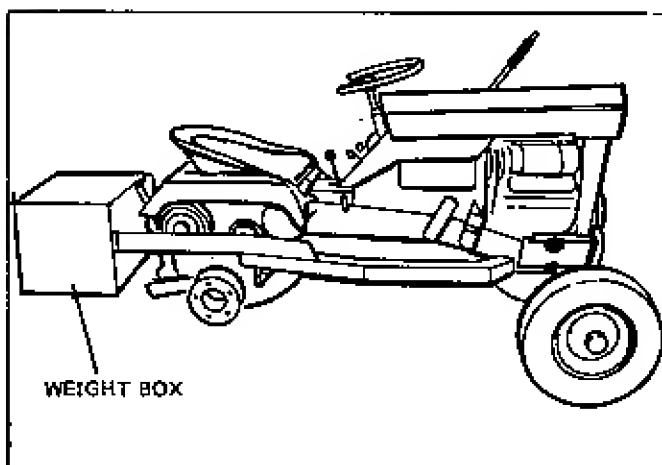


Figure 6.

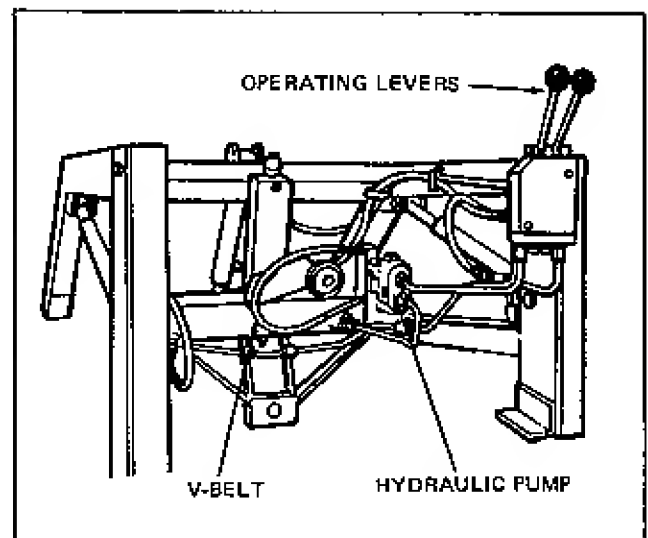


Figure 7.

9. Install V-Belt on hydraulic pump. See Figure 7.

10. Attach hydraulic control valve operating levers as shown in Figure 7 using the capscrow and locknut provided.

11. Install bucket on loader frame using pins and roll pins provided. See Figure 8.

12. Install dump cylinder to bucket using pins and roll pins provided. See Figure 8.

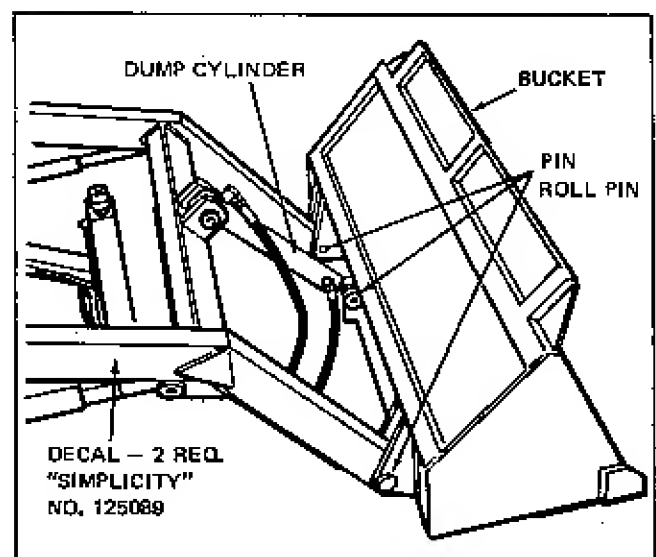


Figure 8.

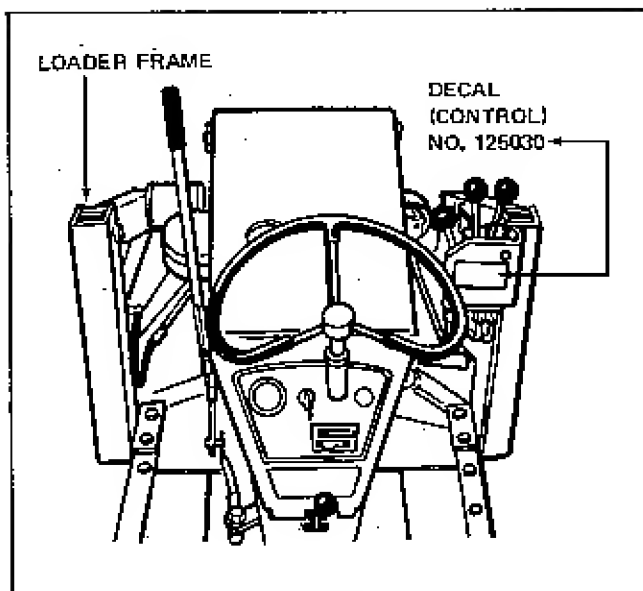


Figure 9.

13. Install loader frame on tractor using the 1/2 x 1-1/4" capscrews, lockwashers and nuts provided. See Figure 9. During installation of loader, install V-Belt around engine pulley, making sure the hydraulic pump pulley and engine pulley are running true to each other for good belt alignment. See Figure 10.

14. On the Landlord Tractor the clutch pedal must be cut off at the second notch. This is necessary to eliminate interference between the R.H. loader frame and the pedal. See Figure 11.

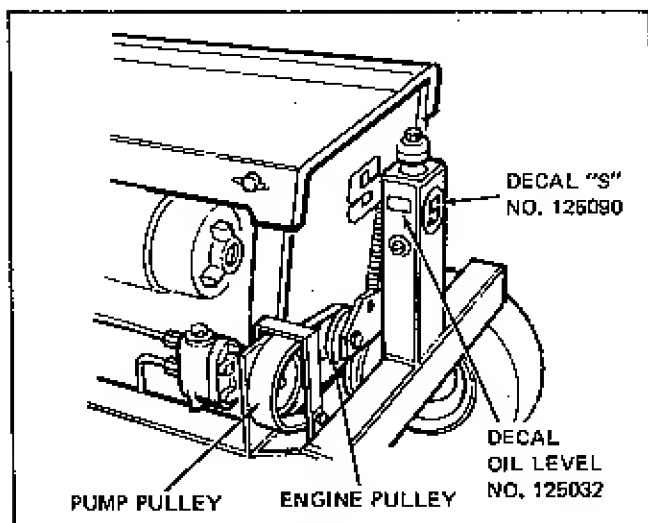


Figure 10.

15. Fill reservoir to proper level with specified oil. Start engine and operate loader to remove air from cylinder. Check and refill hydraulic reservoir.

16. Check daily maintenance before operating loader.

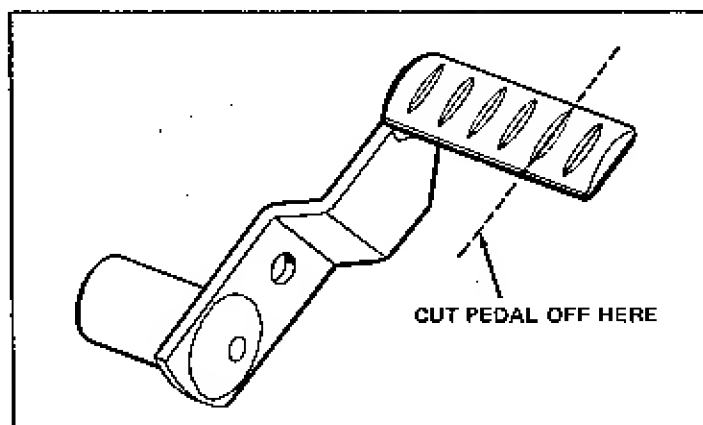


Figure 11.

## MAINTENANCE

Oil used should be non-foaming and have high oxidation resistance. The oil should have a high viscosity index. Detergent type oils are satisfactory if they are non-foaming.

Oil should meet API classification MM-MS.

For highest temperatures of 0° F. use SAE 5. For highest temperatures 0° F. to 70° F. use SAE 10. For temperatures above 70° F. use SAE 20. SAE 10W-30 may be used for all temperature ranges.

### NOTE

Use only clean oil and clean containers. Dirt can destroy hydraulic system components.

## HYDRAULIC OIL

1. Check hydraulic system for proper oil level.
2. Lubricate all pivot points with chassis lubricant (general purpose, automotive grease).

## OPERATION

Before starting unit be sure that all maintenance procedures as listed in the tractor operators manual and in this loader manual have been followed.

Start tractor engine and allow hydraulic system to warm up before operating loader under heavy loads. Cold operation under heavy loads may seriously damage hydraulic pump.

Always operate loader with proper amount of counterweight in weight box (100 to 300 lbs.) When moving with a loaded bucket always carry bucket low and operate tractor slowly. A loaded bucket, carried high, reduces tractor stability. Good operators always carry loads low for added stability.

When lowering lift arms with a loaded bucket, do not stop the lowering abruptly. This causes unnecessary high surge pressures in the hydraulic system and undue strain on the tractor itself.

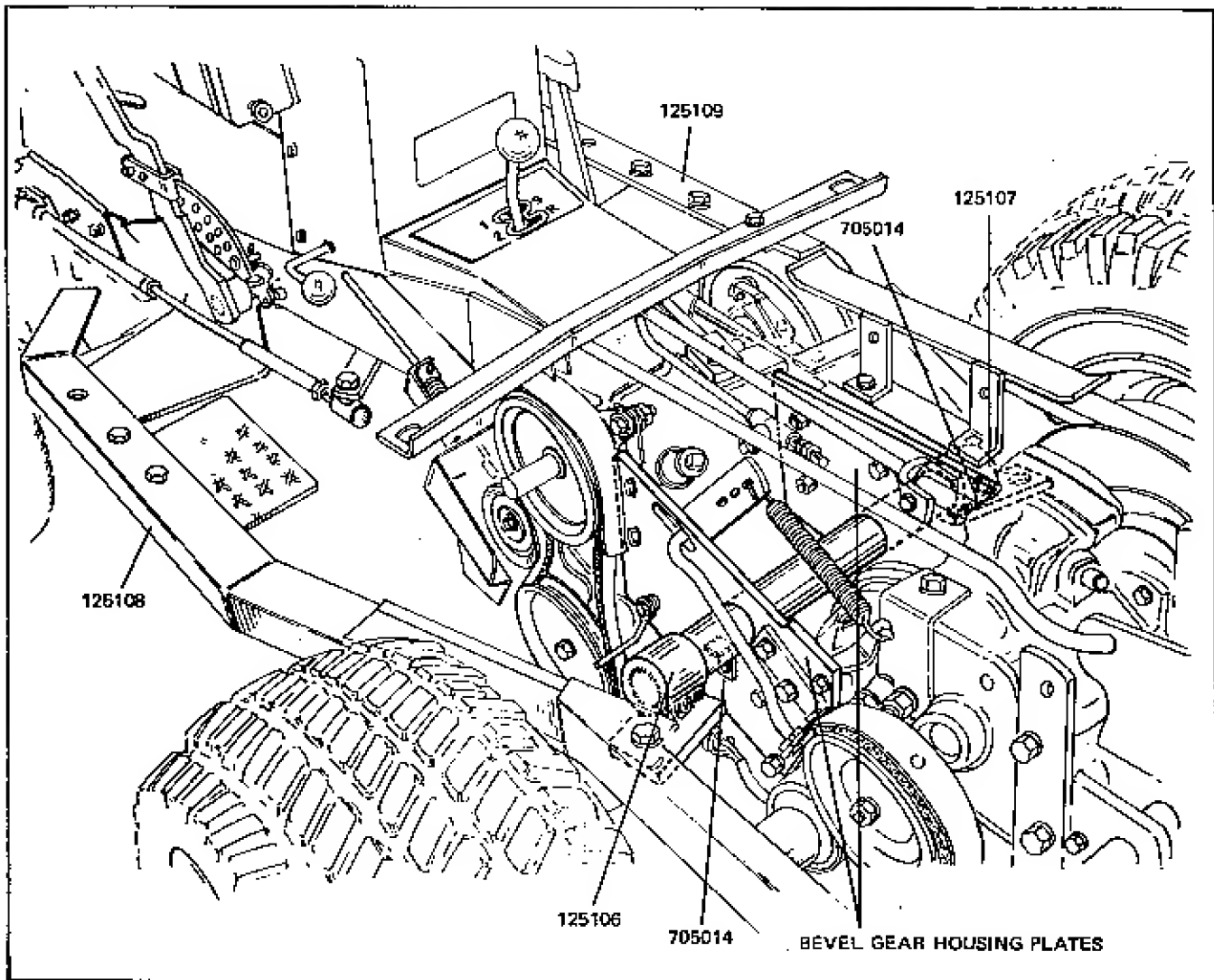
When lifting loads heavier than rated loader capacity, a relief valve in the hydraulic pump will open protecting the hydraulic system. Excessive "By Passing" of this relief valve will cause excessive hydraulic system heat and damage to relief valve. Do not overload.

## REMOVAL

The loader is easily removed from the tractor to make unit available for other work.

To remove loader, remove the two capscrews (each side) that fasten the loader main frame to sub-frame and slide forward. (See Step 13 for mounting).

The Rotary Lawnmower and Snow Thrower attachments can be used without removing the sub-frame.

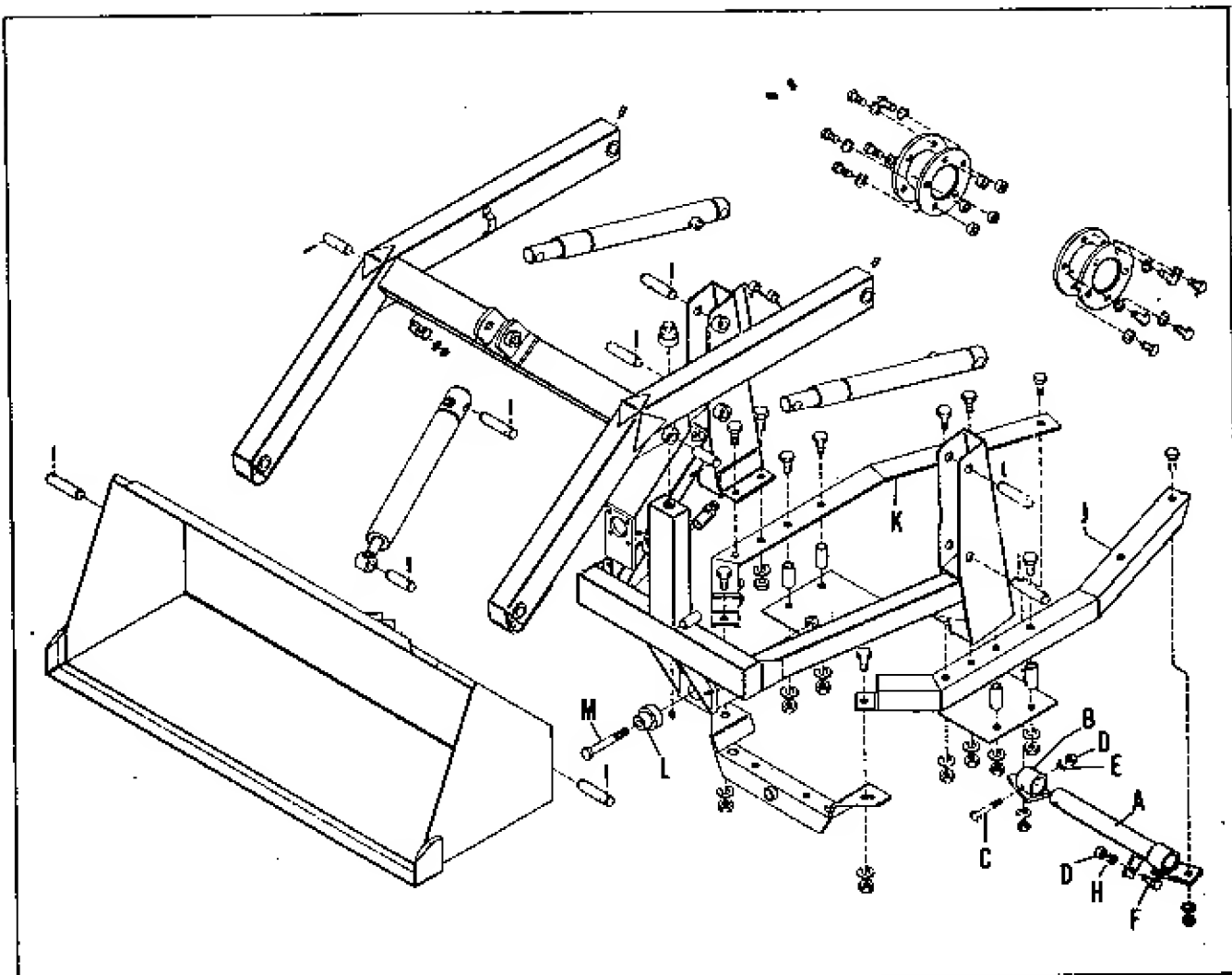


### MOUNTING INSTRUCTIONS

1. Insert the No. 125106 cross mount assembly through the holes in the bevel gear housing plates on the tractor and secure with the (1) 7/16-14 x 1" long capscREW, lockwasher and full hex nut as shown above.

2. Attach the No. 125107 right mount assembly to the cross mount assembly as shown in Figure 1 using the 3/8-16 x 2-1/2" long capscREW, lockwasher and full hex nut.

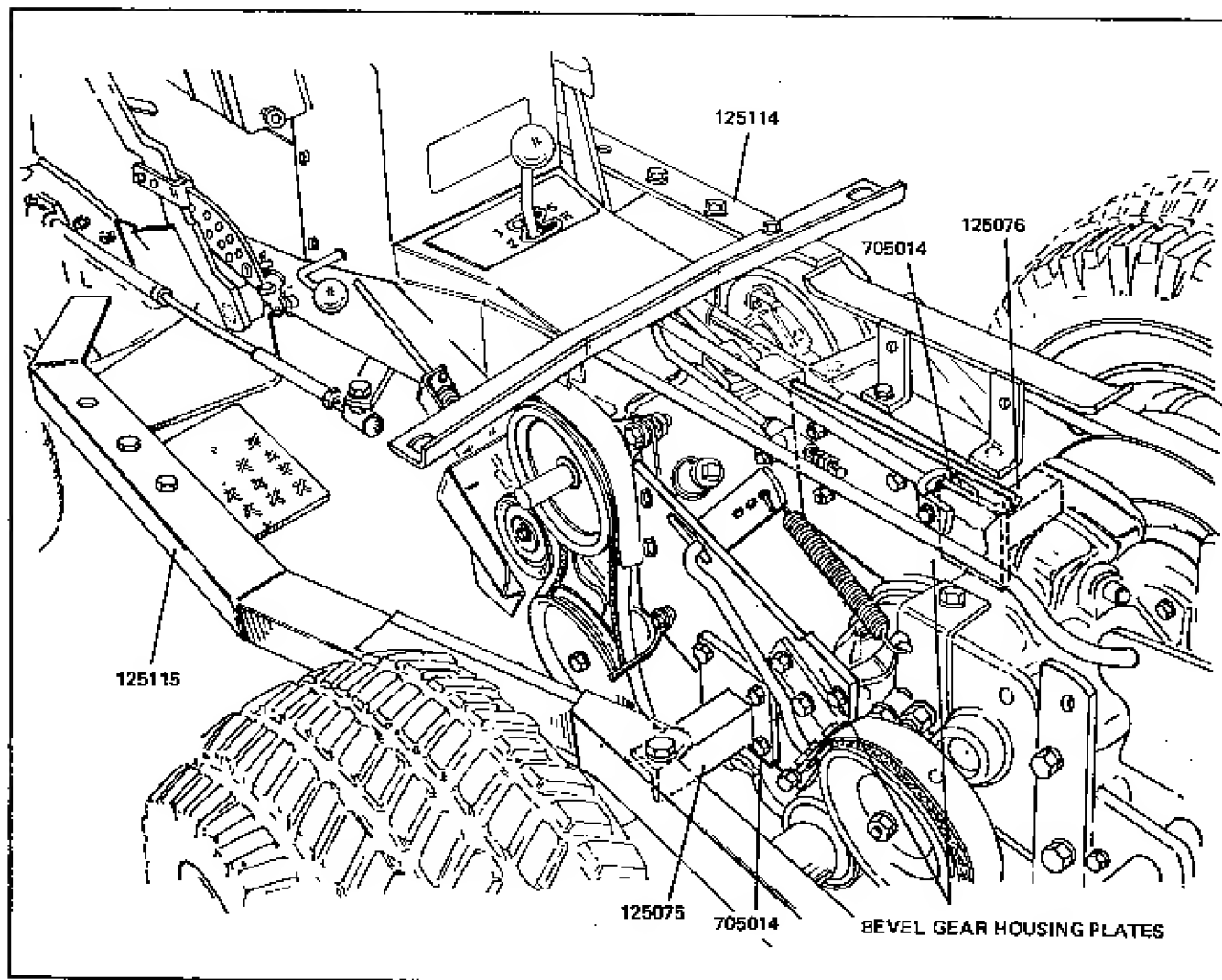
3. Attach the Nos. 125108 and 125109 left and right hand sub-frames to the front mount bracket with the (2) 1/2-13 x 1-1/4" long capscREWS, lockwashers and full hex nuts. Attach the rear of the sub-frames to the cross mount assembly using the (2) 1-1/2-13 x 1-1/4" long capscREWS, lockwashers and full hex nuts as shown above.



12 H.P. FRAME GROUP

Ref. Let.	Part No.	Name of Part	Description
A	125106	Cross Mount	Henry #2019805
B	125107	Right Mount	Henry #2019803
C	705014	Screw-Cap-Hex.	3/8"-16 N.C. x 2-1/2" lg. Henry #919363
D	717003	Nut-Hex.-Full	3/8"-16 N.C. Henry #916950
E	720002	Lockwasher	3/8" Henry #916965
F	705041	Screw-Cap-Hex.	7/16"-14 N.C. x 1" lg. Henry #918212
G	717022	Nut-Hex.-Full	7/16"-14 N.C. Henry #918213
H	720006	Lockwasher	7/16" Henry #918199
J	125108	Sub-Frame-Right	Henry #2019806
K	125109	Sub-Frame-Left	Henry #2019807
L	125110	Front Mount	Henry #2019804
M	706021	Screw-Cap-Hex.	1/2"-20 N.F. x 5" lg. Henry #916428
N	125068	"V"-Belt	Henry #2019808
P	125112	Spring	Henry #2019405

## 10 H.P. ATTACHING KIT MFR. NO. 516



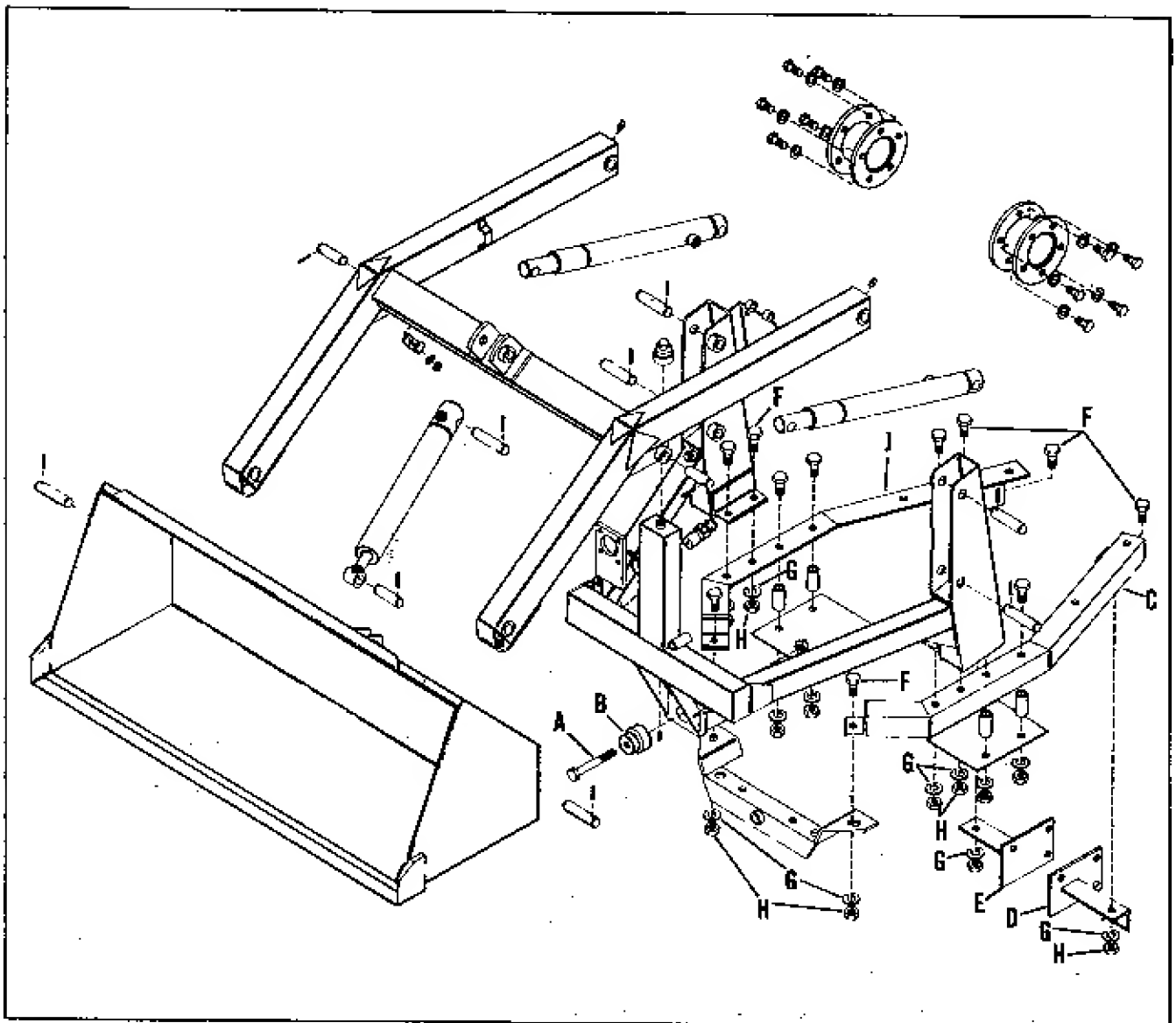
### MOUNTING INSTRUCTIONS

1. The Nos. 125075 and 125076 right and left hand rear brackets and the Nos. 125114 and 125115 right and left hand sub-frame assemblies are included in the No. 516 mounting kit.

2. Install the left and right mounting bracket using the (6) 7/16 x 14 x 1" capscREW and lock-washer already in the bevel gear housing side plates.

3. Attach the Nos. 125115 and 125114 left and right hand sub-frames to the front mount bracket with the (2) 1/2-13 x 1-1/4" long cap-screws, lockwashers and full hex nuts. Attach the rear of the sub-frames to the left and right hand rear brackets.

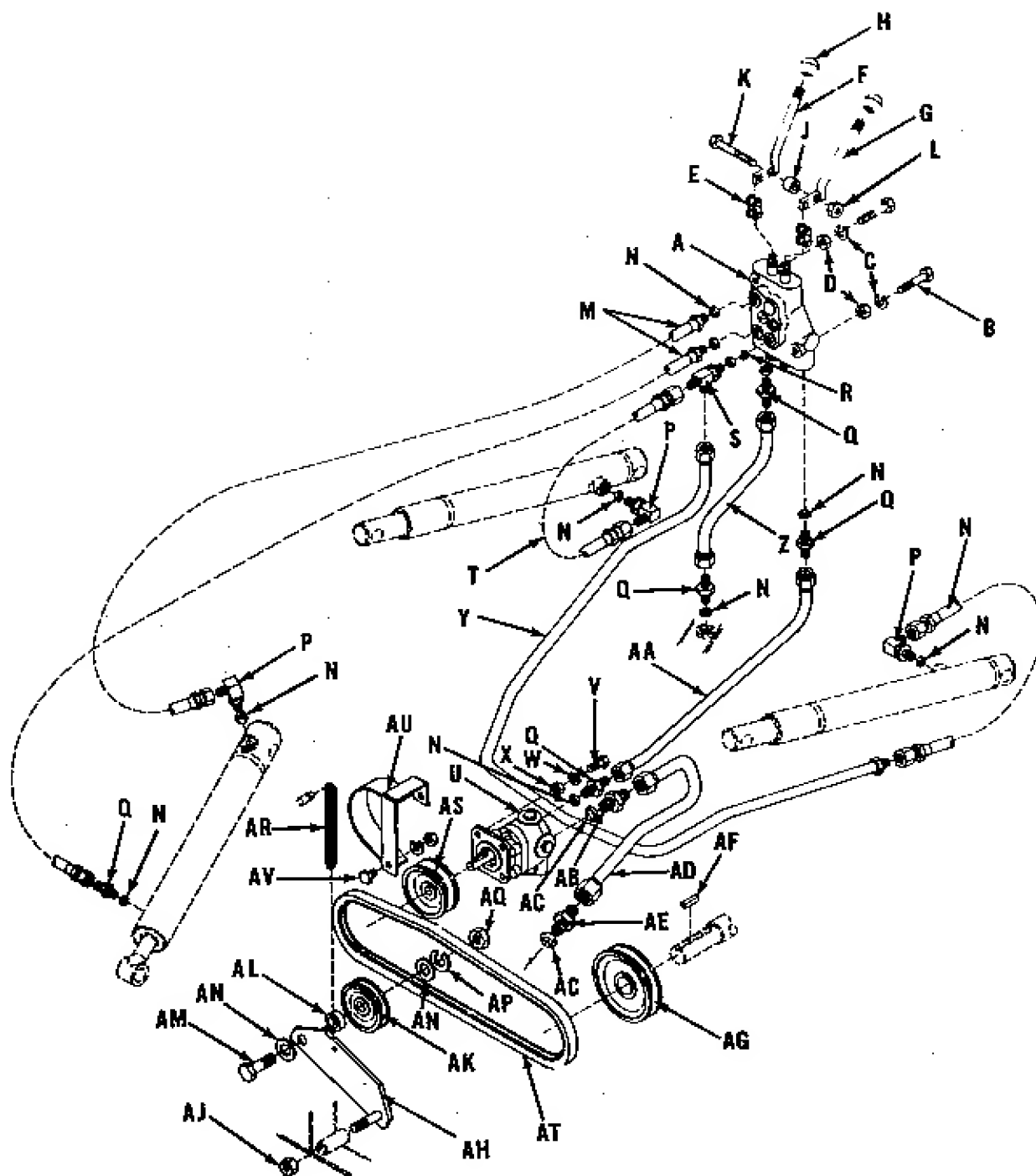




10 H.P. FRAME GROUP

Ref. Let.	Part No.	Description
A	706021	Hex. Capscrew, 1/2"-20 N.F. x 5"
B	125110	Front Mount
C	125115	Left Sub-Frame
D	125075	L.H. Rear Bracket
E	125076	R.H. Rear Bracket
F	705049	Hex. Capscrew, 1/2"-13 N.C. x 1-1/4"
G	720004	Lock Washer, 1/2"
H	717006	Full Hex. Nut, 1/2"-13 N.C.
J	125114	Right Sub-Frame

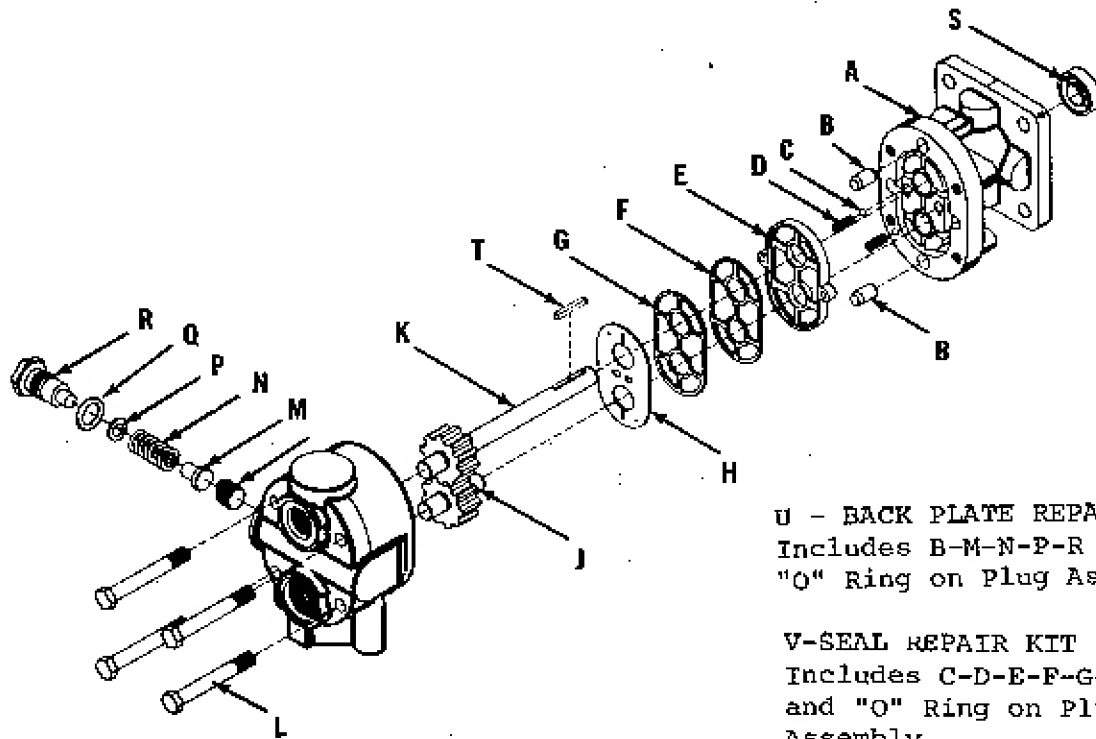
## HYDRAULICS



# HYDRAULICS

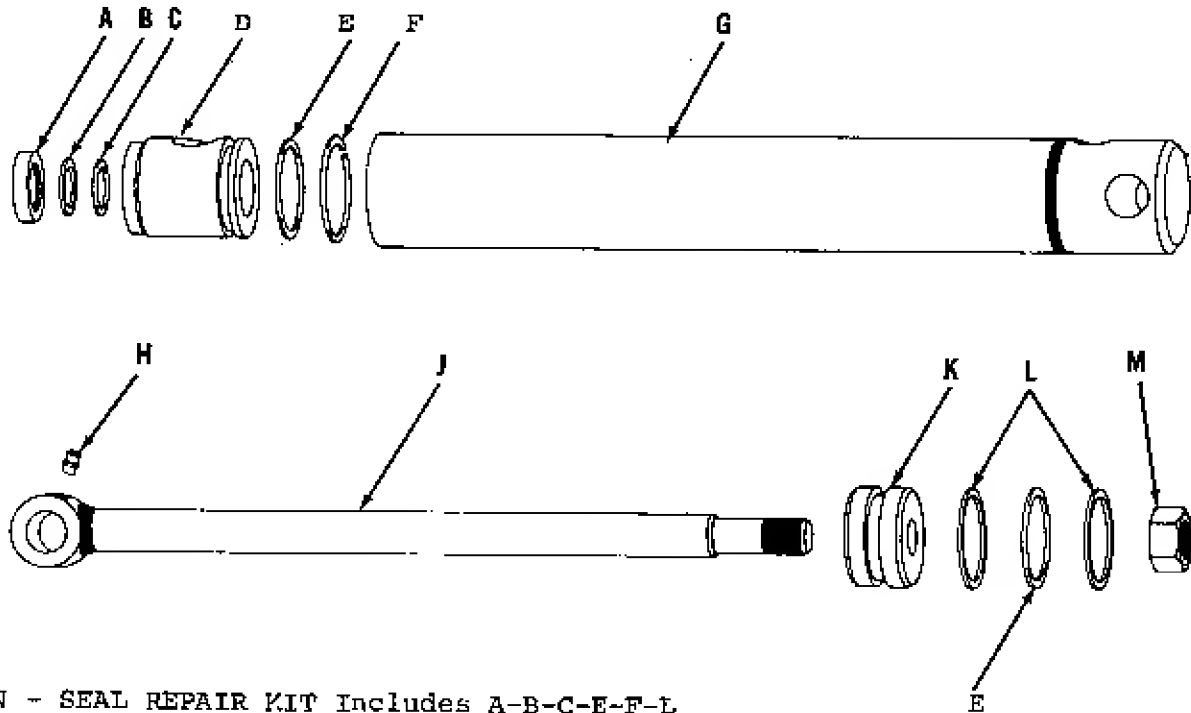
Ref. Let.	Part No.	Description
A	125008	Control Valve Ass'y.
B	705062	Hex. Capscrew, 1/4"-20 N. C. x 2"
C	720003	Lock Washer, 1/4"
D	717005	Full Hex. Nut, 1/4"- 20 N. C.
E	125031	Chain Link
F	125021	Bucket Handle
G	125022	Lift Handle
H	125011	Control Handle Knob
J	125024	Spacer
K	706019	Hex. Capscrew, 1/4" - 28 N. F. x 2-3/4"
L	717526	Full Lock Hex. Nut, 1/4" - 28 N. F.
M	125019	Hose Ass'y.
N	125103	"O" Ring
P	125079	90° Elbow Connector
Q	125078	Straight Connector (6 BC)
R	125012	Orifice Plate Restrictor
S	125016	Run Tee Connector (6 BCSTC)
T	125018	Hose Ass'y.
U	125009	Pump Ass'y. - Cessna
V	705007	Hex. Capscrew, 5/16" - 18 N. C. x 1"
W	720001	Lock Washer, 5/16"
X	717001	Hex. Full Nut, 5/16" - 18 N. C.
Y	125017	Lift Tube Ass'y.
Z	125015	Return Tube Ass'y.
AA	125014	Pressure Tube Ass'y.
AB	125077	Straight Connector (8 BC)
AC	125104	"O" Ring
AD	125013	Suction Tube Ass'y.
AE	125034	Filter Connector
AF	125088	Key
AG	125067	Pulley
AH	125025	Idler Lever Ass'y.
AJ	717515	Full Lock Hex. Nut, 3/8" - 24 N. F.
AK	125105	Idler Pulley
AL	125023	Spacer
AM	705035	Hex. Capscrew, 1/2" - 13 N. C. x 2"
AN	719004	Plain Washer, 1/2" Std.
AP	720004	Lock Washer, 1/2"
AQ	717006	Full Hex. Nut, 1/2" - 13 N. C.
AR	125112	Tension Spring
AS	125010	Pulley
AT	125068	"V" Belt
AU	125026	Shield
AV	705002	Hex. Capscrew, 1/4" - 20 N. C. x 1/2"
AW	720003	Lock Washer, 1/4"
AX	717005	Full Hex. Nut, 1/4" - 20 N. C.

# PUMP



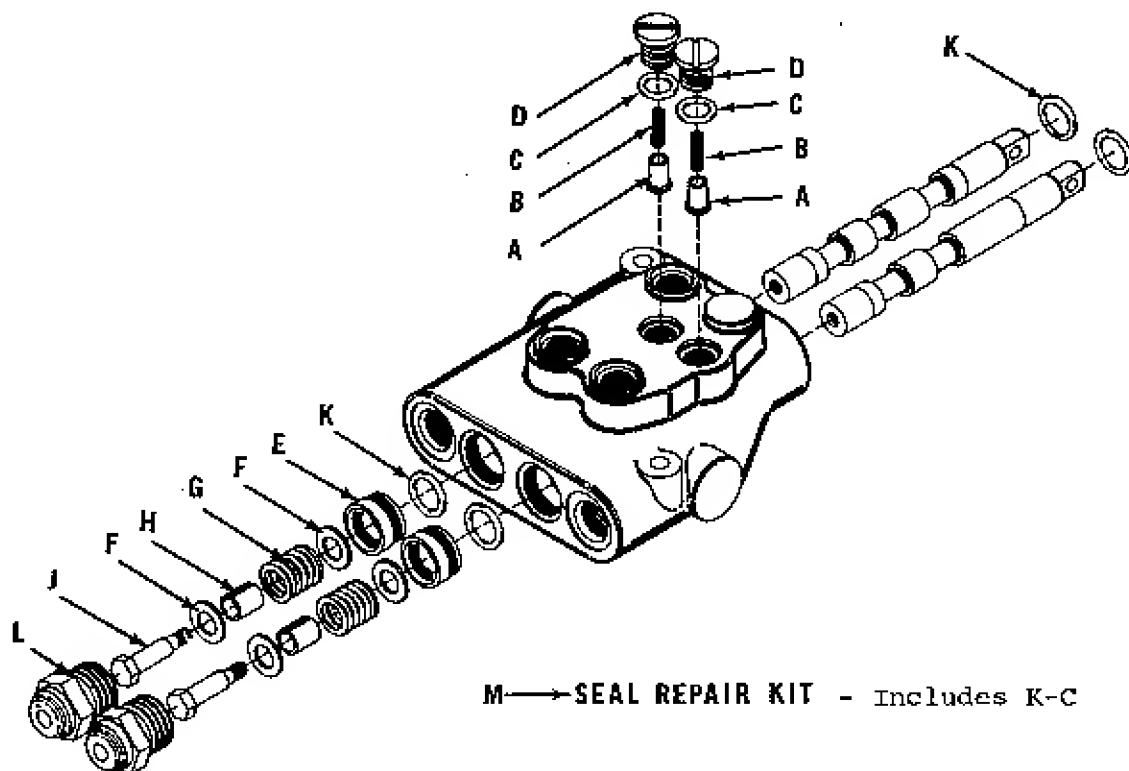
Ref. Let.	Part No.	Description
A	125050	Front Plate Ass'y.
B	125055	Dowel Pin
C	125084	Steel Ball
D	125051	Check Spring
E	125047	Diaphragm Seal
F	125048	Protector Gasket
G	125046	Back-Up Gasket
H	125049	Diaphragm
J	125052	Idler Shaft Ass'y.
K	125053	Drive Shaft Ass'y.
L	715076	Hex. Cap Screw, 1/4"-20 N. C. x 2"
M	125043	Poppet
N	125045	Relief Spring
P	125044	Shim
Q	125083	"O" Ring
R	125054	Hex. Plug
S	125046	Shaft Seal
T	125085	Key
U	125099	Back Plate Repair Kit
V	125100	Major Seal Repair Kit

# BUCKET CYLINDER



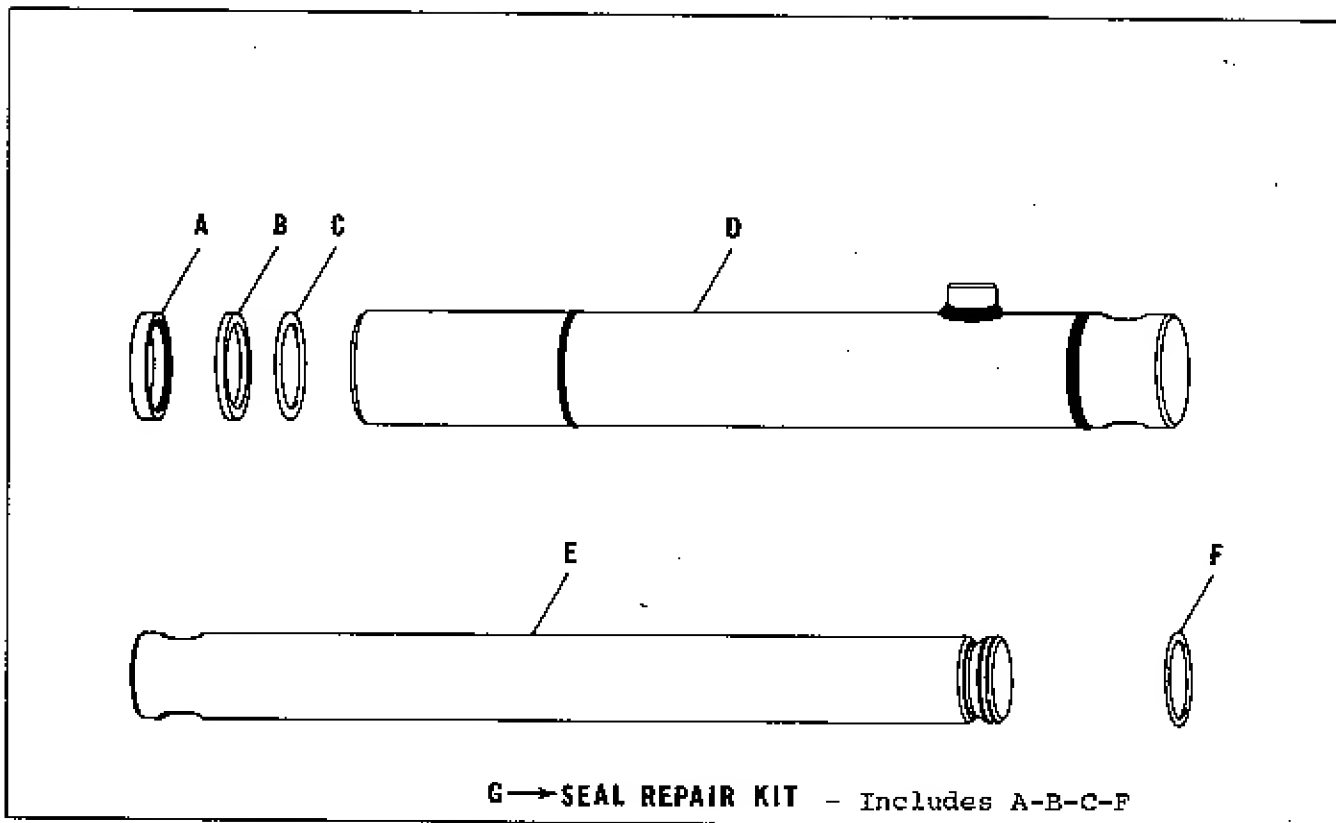
Ref. Let.	Part No.	Description
A	125042	Ring Wiper
B	125041	Back-Up Washer
C	125080	"O" Ring
D	125038	Cylinder Head
E	125081	"O" Ring
F	125039	Retainer Ring
G	125035	Cylinder Tube Ass'y.
H	727008	Grease Fitting
J	125036	Piston Rod Ass'y.
K	135037	Piston
L	125040	Back-Up Washer
M	717527	Full Lock Hex. Nut, 5/8"-18 N. F.
N	125101	Major Seal Repair Kit

# CONTROL VALVE



Ref. Let.	Part No.	Description
A	125057	Lift Check Plunger
B	125059	Lift Check Spring
C	125087	"O" Ring
D	125058	Lift Check Plug Ass'y.
E	125063	Bushing
F	125065	Steel Washer
G	125064	Spool Spring
H	125061	Spool Spacer
J	125060	Spool Screw
K	125086	"O" Ring
L	125062	Cap Ass'y.
M	125098	Major Seal Repair Kit

# LIFT CYLINDER



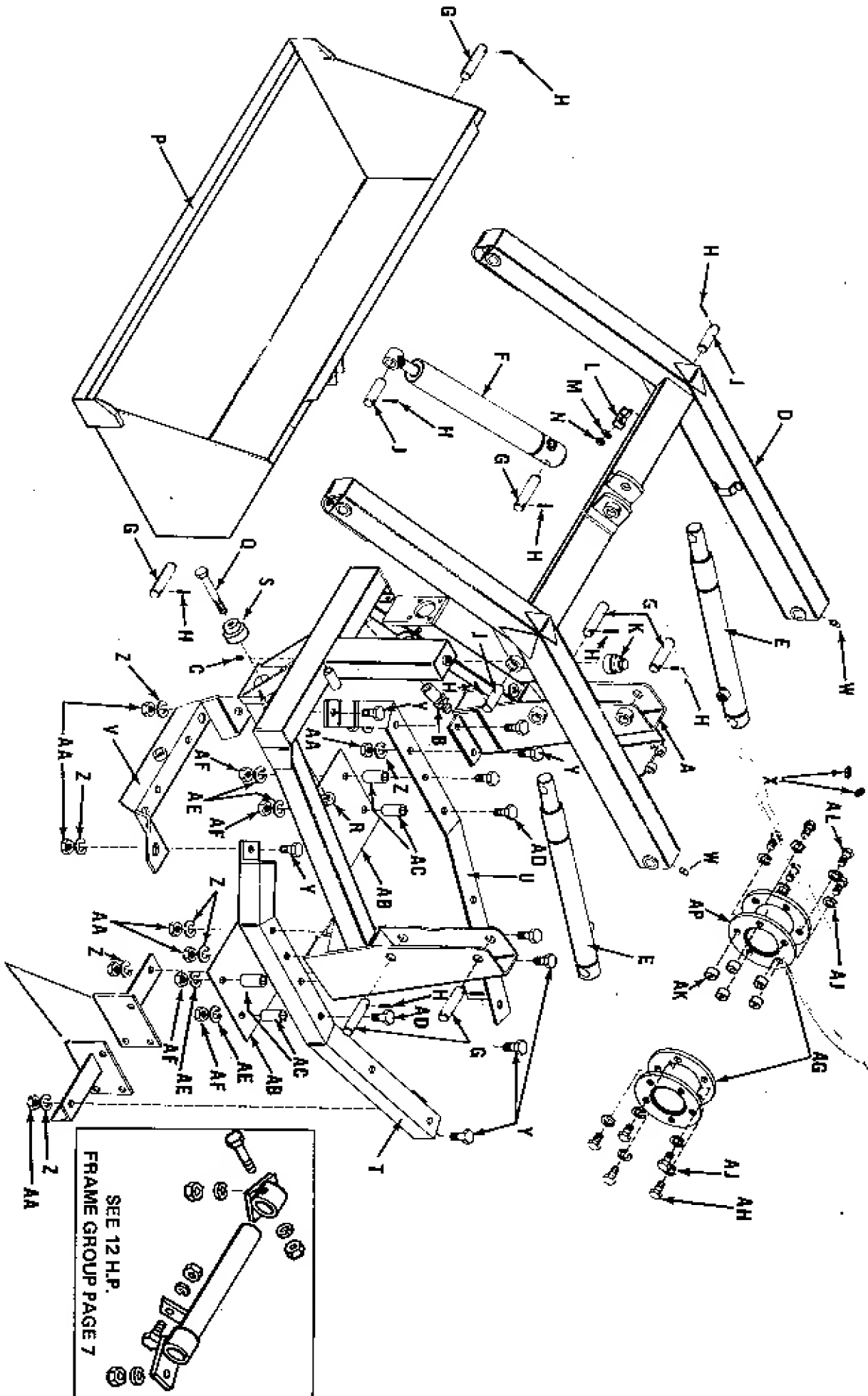
Ref. Let.	Part No.	Description
A	125096	Rod Wiper & Seal
B	125095	Back-Up Washer
C	125082	"O" Ring
D	125093	Cylinder Tube Ass'y.
E	125092	Piston Rod
F	125094	Lock Ring
G	125097	Major Seal Repair Kit

# FRAME GROUP

Ref. Let.	Part No.	Description
A	125004	Main Frame Ass'y.
B	125113	Filter
C	726002	Pipe Plug, 1/4" N. P. T.
D	125005	Lift Arm Assembly
E	125007	Lift Arm Cylinder
F	125006	Bucket Cylinder
G	125027	Loader Pin
H	723015	Roll Pin, 3/16"x1-1/4"
J	125028	Lift Arm Pin
K	125069	Breather
L	125020	Hose Clamp
M	720003	Lock Washer, 1/4"
N	717005	Hex. Full Nut, 1/4"-20 N. C.
P	125002	Bucket, 42"
Q	706021	Hex. Capscrew, 1/2"-20 N. F. x4-1/4"
R	717516	Full Hex. Lock Nut, 1/2"-20 N. F.
S	125110	Front Mount
T	125115	Left Sub-Frame
U	125114	Right Sub-Frame
V	125071	Front Mount Bracket
W	727012	Grease Fitting
X	713508	Cup Pl. Setscrew, 7/16"-20 N. F. x1/2"
Y	705049	Hex. Capscrew, 1/2"-13 N. C. x1-1/4"
Z	720004	Lock Washer, 1/2"
AA	717006	Full Hex. Nut, 1/2"-13 N. C.
AB	125074	Floor Board
AC	125070	Spacer
AD	705050	Hex. Capscrew, 1/2"-13 N. C. x2-3/4"
AE	720004	Lock Washer, 1/2"
AF	717006	Full Hex. Nut, 1/2"-13 N. C.
AG	157415	Dual Wheel Adapter Ass'y.
AH	706004	Hex. Capscrew, 7/16"-20 N. F. x1"
AJ	720006	Lock Washer, 7/16"
AK	105133	Spacer
AL	706003	Hex. Capscrew, 7/16"-20 N. F. x1-1/2"



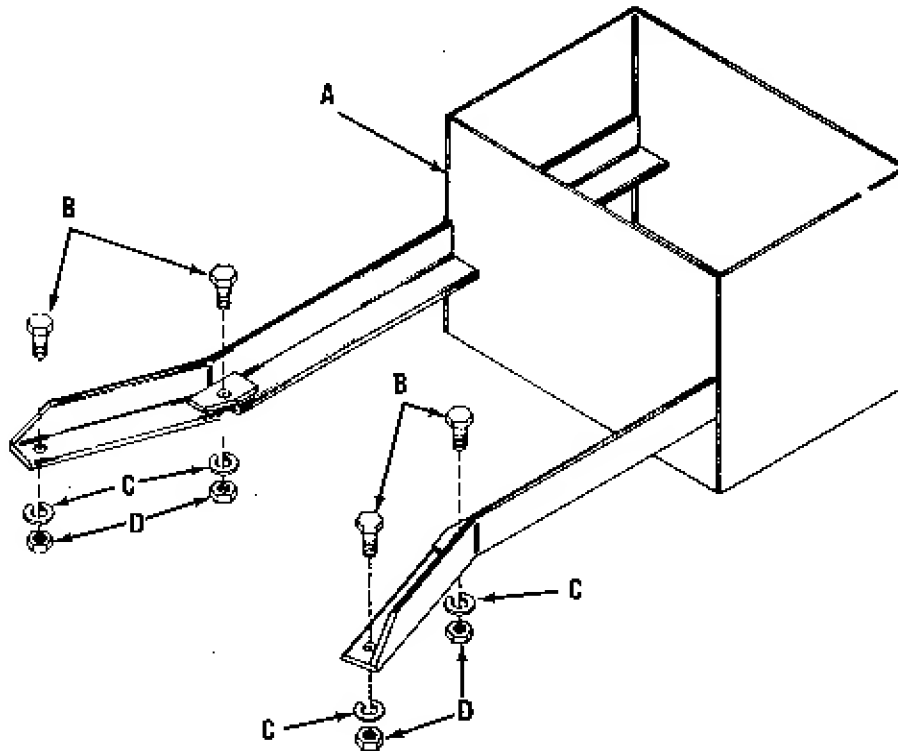
# FRAME GROUP



SEE 10 H.P.  
FRAME GROUP PAGE 9

SEE 12 H.P.  
FRAME GROUP PAGE 7

# WEIGHT BOX



Ref. Let.	Part No.	Description
A	125003	Weight Box
B	705049	Hex Capscrew, 1/2"-13 N.C. x 1-1/4"
C	720004	Lock Washer, 1/2"
D	717006	Full Hex. Nut, 1/2"-13 N.C.

## WARRANTY

The company warrants Simplicity Products to be free from defects in material and workmanship except the company makes no warranty express or implied with respect to tires, engines and engine accessories which generally are warranted by their respective manufacturers. Any part covered by this warranty which is proven defective within one year, under normal use, from date of purchase, will be replaced free of charge, f.o.b. Port Washington, Wisconsin, provided such part is returned to factory transportation charges prepaid and is found to be defective upon examination at the factory. The company is not obligated under this warranty to bear cost of labor or delivery charges in replacement of defective parts. This warranty does not apply to any Simplicity Products altered outside of Simplicity's factory. Such replacement of defective parts shall be the exclusive remedy and in no event shall Simplicity be liable for consequential damages. EXCEPT AS SPECIFICALLY PROVIDED HEREIN, THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON ANY SIMPLICITY PRODUCT.

This form is to be used in lieu of the Registration (Warranty) Card.

Should warranty service be necessary, the information below should be presented to the authorized SIMPLICITY Dealer.

Customer's Name \_\_\_\_\_

Address \_\_\_\_\_

Mfg. No. \_\_\_\_\_ Serial No. \_\_\_\_\_

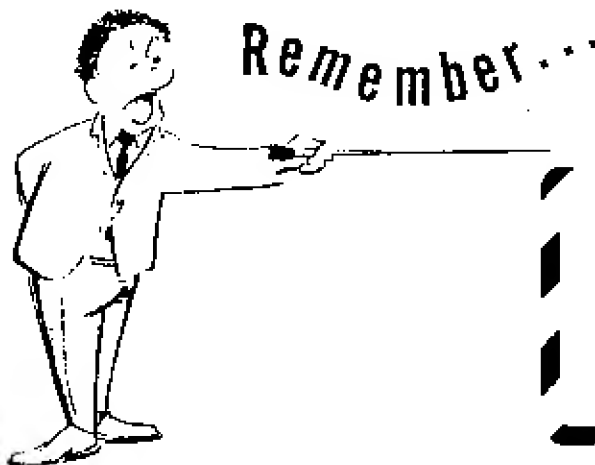
Date Purchased \_\_\_\_\_

Purchased From \_\_\_\_\_

Address \_\_\_\_\_

Engine Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_ Type No. \_\_\_\_\_

To obtain replacement parts from dealer, advise quantity, part number and description.



### FOR YOUR SAFETY

- 1 ALWAYS STOP ENGINE BEFORE LEAVING MACHINE
- 2 ALWAYS STOP ENGINE BEFORE SERVICING OR ADJUSTING MACHINE OR EQUIPMENT
- 3 ALWAYS KEEP HANDS, FEET AND CLOTHING AWAY FROM POWER-DRIVEN PARTS



**SIMPLICITY MANUFACTURING COMPANY, INC.**  
**PORT WASHINGTON, WISCONSIN 53074**